

Items 1 through 4 must be completed for glazing/shading combinations by using the Default Table for Fenestration Products (Table S-1) ; documented manufacturer's data for labeled fenestration products, or Solar Heat Gain Coefficients Used for Exterior Shading Attachments (Table S-2) for the specific conditions indicated (#1a or #1b or #3). For instructions on filling out the worksheet, see *Shading* in the *RM Glossary, Appendix G*.

General Information

1a. For Fenestration Products w/NFRC testing and labels:

SHGC_{fen} = _____

OR

1b. For Fenestration Products without NFRC testing and labels (Table S-1):

SHGC_{fen} = _____

1c. Frame Type

1d. Product Type

1e. Glazing Type

1f. Single/Double Pane

metal, non-metal,
metal w/thermal break

operable/fixed

(visibly) tinted
uncoated (not visibly tinted)

single pane/double pane

2. Skylight

(Y/N)_____

("Skylights" must be mounted on a surface of pitch less than or equal to 1 in 12 for prescriptive compliance)

Combined Exterior Shade with Fenestration

Exterior Shade Type: _____

3. SHGC_{Exterior Shade}: _____

(If no exterior shade, assume standard bug screens, SHGC_{Exterior Shade} = 0.76 for ordinary windows. This requirement does not apply to skylights where SHGC_{Exterior Shade} is assumed to be 1.00. If another exterior shade is substituted for bug screens, use one of the values from Table S-2

$$4. \left[\left(\frac{\text{SHGC}_{max}}{\text{SHGC}_{min}} \times 0.2875 \right) + 0.75 \right] \times \text{SHGC}_{min} = \text{SHGC}_{\text{Shade Open}}$$

Where:

SHGC_{max} = Larger of (#1a or #1b) or #3SHGC_{min} = Smaller of (#1a or #1b) or #3

Note: Calculated Shading Coefficient values for SHGC shade open may be used directly for prescriptive packages.

Target Value for SHGC shade open is 0.39 for Package Requirement of SHGC_{fen} = 0.40.

TABLES

Table S-1: DEFAULT FENESTRATION SOLAR HEAT GAIN COEFFICIENT

| <u>Frame Type</u> | <u>Product</u> | <u>Glazing</u> | <u>Total Window SHGC</u> | |
|----------------------|----------------|----------------|--------------------------|--------------------|
| | | | <u>Single Pane</u> | <u>Double Pane</u> |
| Metal | Operable | Uncoated | 0.80 | 0.70 |
| Metal | Fixed | Uncoated | 0.83 | 0.73 |
| Metal | Operable | Tinted | 0.67 | 0.59 |
| Metal | Fixed | Tinted | 0.68 | 0.60 |
| Metal, Thermal Break | Operable | Uncoated | 0.72 | 0.63 |
| Metal, Thermal Break | Fixed | Uncoated | 0.78 | 0.69 |
| Metal, Thermal Break | Operable | Tinted | 0.60 | 0.53 |
| Metal, Thermal Break | Fixed | Tinted | 0.65 | 0.57 |
| Non-Metal | Operable | Uncoated | 0.74 | 0.65 |
| Non-Metal | Fixed | Uncoated | 0.76 | 0.67 |
| Non-Metal | Operable | Tinted | 0.60 | 0.53 |
| Non-Metal | Fixed | Tinted | 0.63 | 0.55 |

SHGC = Solar Heat Gain Coefficient

TABLES (Continued)

Table S-2: Solar Heat Gain Coefficients Used for Exterior Shading Attachments for Form S and Computer Performance Methods ^{1,2}

| Exterior Shading Device³ | w/Single Pane Clear Glass & Metal Framing⁴ |
|--|--|
| 1) Standard Bug Screens | 0.76 |
| 2) Exterior Sunscreens with weave 53*16/inch | 0.30 |
| 3) Louvered Sunscreens w/louvers as wide as openings | 0.27 |
| 4) Low Sun Angle (LSA) Louvered Sunscreens | 0.13 |
| 5) Roll-down Awning | 0.13 |
| 6) Roll Down Blinds or Slats | 0.13 |
| 7) None (for skylights only) | 1.00 |

1. These values may be used on line 9 of the Solar Heat Gain Coefficient (SHGC) Worksheet (form S) to calculate exterior shading with other glazing types and combined interior and exterior shading with glazing.

2. Exterior operable awnings (canvas, plastic or metal), except those that roll vertically down and cover the entire window, should be treated as overhangs for purposes of compliance with the Standards.

3. Standard bug screens must be assumed for all fenestration unless replaced by other exterior shading attachments. The solar heat gain coefficient listed for bug screens is an area-weighted value that assumes that the screens are only on operable windows. The solar heat gain coefficient of any other exterior shade screens applied only to some window areas must be area-weighted with the solar heat gain coefficient of standard bug screens for all other glazing (see Weighted Averaging in the Glossary). Different shading conditions may also be modeled explicitly in the computer performance method.